

# Kids' pages

*Are you ready to learn about the bay?*

*News for the kids  
of Tampa Bay!*

Spring 2017



## Got a Question? Ask a Scientist!

### *In This Issue:*

- What types of sharks are found in Tampa Bay?
- Meet the sharks of Tampa Bay
- Shark Conservation
- Fun Facts
- Make your own shark hat!

### *Mark your Calendars!*



### **Fourth Annual Earth Day Celebration 4/22**

Join us for St. Petersburg's Earth Day Celebration in Historic Williams Park on April 22, 10 am - 5 pm. Check out displays from us and other environmental groups, green businesses, and family focused activities that foster a deep appreciation of our beautiful Tampa Bay.

**Q** Are there sharks in the Tampa Bay estuary?

**A** Yes, there are over a dozen species of sharks that swim in the waters of Tampa Bay. Though sharks are considered primarily marine animals, they are still found in brackish, estuarine waters. Like many other animals, sharks use the estuary environment as a place to have their young. Young sharks are protected within the various habitats of the estuary and have an abundant supply of food. Some of the most common sharks found in our estuary are blacktip, bonnethead, bull, hammerhead, and spinner sharks.

Sharks belong to a group of unique fish with a skeleton made of cartilage, strong jaws, paired fins, and paired nostrils, known as the class Chondrichthyes (kän-'drik-thē-ēz). Sharks are considered apex predators in the ocean. This means that they are at the very top of the food web. They are primarily carnivores, eating various fish, crustaceans, and mollusks. Many sharks are opportunistic feeders and will prey on weak or injured animals that make an easy catch. As predators, sharks help maintain healthy and balanced ocean ecosystems.

Sharks possess many amazing adaptations that allow them to thrive as predators of the sea. Sharks share our five senses of smell, taste, hearing, touch, and sight, but can also sense electrical fields and



vibrations in the water. This allows them to easily locate prey and migrate through the ocean. Sharks' bodies and fin shapes allow them to be very hydrodynamic, meaning they move quickly and smoothly through the water.

Despite their often scary reputation, sharks are not typically a threat to humans. Humans are not part of a shark's diet and sharks are not actively attacking humans. Records of shark attacks are typically accidental, occurring when a shark is confused or curious, or when it is defending itself. Sharks are actually considered less dangerous than elephants, pigs, dogs, bees, and lightning! 🐋

*Sources:*  
[coast.noaa.gov](http://coast.noaa.gov); [defenders.org](http://defenders.org); [edis.ifas.ufl.edu](http://edis.ifas.ufl.edu);  
[myfwc.com](http://myfwc.com); [nmfs.noaa.gov](http://nmfs.noaa.gov); [nsgl.gso.uri.edu](http://nsgl.gso.uri.edu)  
[oceana.org](http://oceana.org); [oceanofk.org](http://oceanofk.org); [oceanservice.noaa.gov](http://oceanservice.noaa.gov);  
[seaworld.org](http://seaworld.org)  
*Image source:* flickr.com

# Expand Your Mind!

## Meet & Greet: The Sharks of Tampa Bay



### BONNETHEAD SHARK

*Sphyrna tiburo*

Bonnethead sharks are a species of hammerhead found in estuaries along the coasts of the Americas. Bonnetheads are named for the bonnet or shovel-shaped heads. Their average size is three to four feet and they can weigh up to 24 pounds. The head shape of hammerheads helps them handle prey, improves their vision, and allows them to better detect electrical signals. Bonnetheads are often found in groups of three to fifteen individuals. They can be found in the bay over seagrass, mud and sandy habitats

Sources: [aqua.org](http://aqua.org); [bbc.com](http://bbc.com)  
[iucnredlist.org](http://iucnredlist.org); [marinebio.org](http://marinebio.org)  
[seaworld.org](http://seaworld.org); [livescience.com](http://livescience.com)



### BLACKTIP SHARK

*Carcharhinus limbatus*

The blacktip shark is widespread throughout tropical waters. Blacktips are found off the coast of every continent except Antarctica. It is thought that blacktip sharks are the most abundant coastal species in the Northwest Gulf of Mexico. They are easily recognized by the black tips on their fins. The average size of a blacktip is about five feet and they can weigh up to 40 pounds. Blacktips are fast swimmers and energetic feeders. They can be seen leaping out of the water when feeding on schools of fish. Blacktip sharks are typically found in shallow waters around river mouths and estuaries.

Sources: [flmnh.ufl.edu](http://flmnh.ufl.edu);  
[iucnredlist.org](http://iucnredlist.org); [heraldonline.com](http://heraldonline.com)



### BULL SHARK

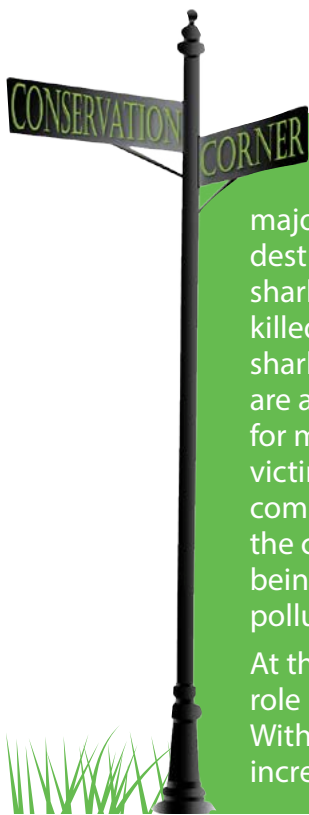
*Carcharhinus leucas*

Bull sharks are found in tropical waters worldwide. Bull sharks are some of the larger sharks found in our estuary with an average length of 8 feet and weight between 200-290 pounds. The bull shark gets its name from its wide body and bold, aggressive behavior. They are opportunistic feeders and prey upon large fish, turtles, birds, and marine mammals. Bull sharks prefer to live in bays and estuaries. They have even been found to thrive in freshwater ecosystems such as rivers.

Sources: [flmnh.ufl.edu](http://flmnh.ufl.edu); [iucnredlist.org](http://iucnredlist.org);  
[oceana.org](http://oceana.org); [sharkopedia.discovery.com](http://sharkopedia.discovery.com)

Our education programs get kids into the bay!





## Shark Populations

There are over 400 species of sharks found worldwide, all of which face major threats. Commercial fishing and habitat destruction are two of the major causes of shark population decline. Millions of sharks are killed annually for their fins. In Asia, the fins of sharks are used to make shark fin soup. Sharks are also fished as a sport, for their meat, and for medicinal purposes. Sharks are also often victims of bycatch - or accidental catch - in commercial fishing nets. Furthermore, many of the coastal habitats that sharks call home are being negatively impacted by climate change, pollution, and destruction.

At the top of the food web, sharks play a key role in the balance of ocean ecosystems. Without sharks, large fish populations would increase causing smaller fish populations to

diminish. Sharks also maintain the health of the ocean by removing sick and diseased animals.

They are considered indicator species. This means that if they are living in a given environment, there is a good chance that the water and other plants and animals in that environment are healthy. To protect our sharks, the United States have strict management practices in place. As conservationists, we can do our part by eliminating waste in our oceans and following safe and proper fishing techniques.



Sources: [defenders.org](http://defenders.org); [eu.oceana.org](http://eu.oceana.org); [fisheries.noaa.gov](http://fisheries.noaa.gov); [seethewild.org](http://seethewild.org); [magazine.diviac.com](http://magazine.diviac.com)

## Fun Facts about SHARKS!

- The whale shark, the world's largest shark, has been known to reach lengths of 60 feet.
- The shortfin mako is the fastest shark, clocking in at bursts of speeds of 46 miles per hour.
- Sharks continually replace their teeth. Some sharks have over 30,000 teeth in their lifetime.
- Many shark species must swim constantly in order to keep oxygen-rich water flowing over their gills.
- Sharks can detect heartbeats. They pick up the electrical pulse of the heart through receptors called the Ampullae of Lorenzini.
- Sharks' livers are filled with oil known as squalene. Squalene is thought to decrease the risk of cardiovascular diseases and cancer in humans.

Sources: [amnh.org](http://amnh.org); [elasmobranch-research.org](http://elasmobranch-research.org); [marinebiodiversity.ca](http://marinebiodiversity.ca); [ocean.si.edu](http://ocean.si.edu); [scienceforlife.eu](http://scienceforlife.eu); [sharksavers.org](http://sharksavers.org)

## Did You Know...

Sharks have existed for over 450 million years. That's before the dinosaurs!  
Sharks can be considered living fossils. Source: [sharksavers.org](http://sharksavers.org)



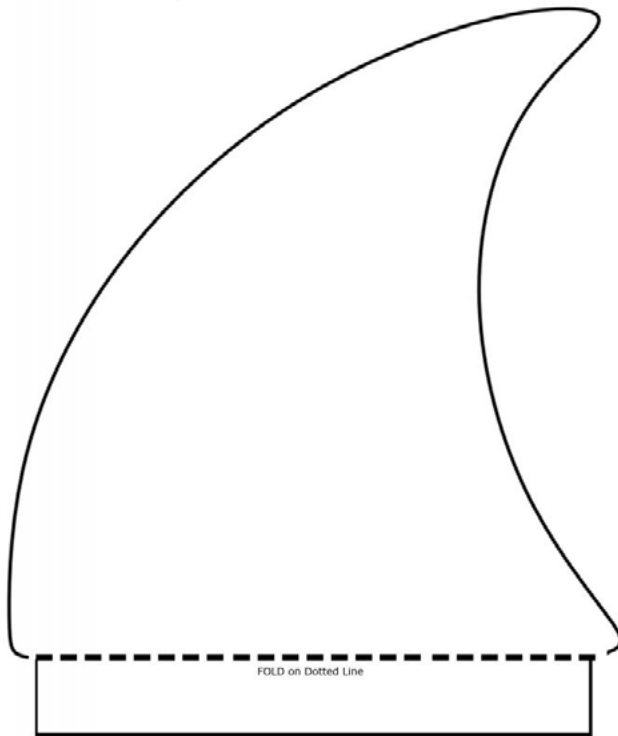


## Fun Activity:

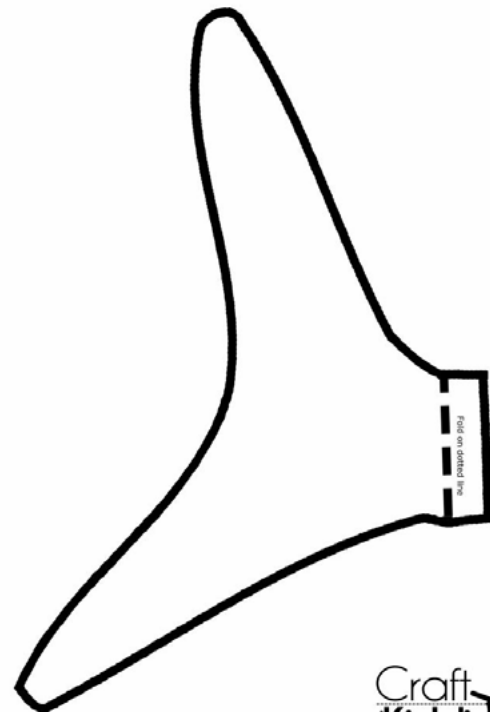
### Make your very own shark hat!

1. Print and cut out the shark fin and tail.
2. Cut three strips of construction paper to make a headband. Two of the strips will be used to make the headband, and the third strip of paper goes across the top.
3. Decorate your band, fin, and tail.
4. Make your headband by gluing two strips of paper together at a length to fit around your head.
5. Glue the third strip of paper to the top of your headband.
6. Glue on your fin and tail.
7. Now you are ready to wear your shark hat!

SHARK FIN



SHARK TAIL



Source: [craftkiddies.com](http://craftkiddies.com)

Craft  
Kiddies™



Kids' Pages is a quarterly newsletter supplement to the Tampa Bay Watch Log.

Please get your kids involved and sign them up to be a member today! eMail [membership@tampabaywatch.org](mailto:membership@tampabaywatch.org) or visit [TAMPABAYWATCH.ORG](http://TAMPABAYWATCH.ORG).

Cover masthead artwork drawn by Sarah Kelly, one of Tampa Bay's talented youth artists.



# Kids' pages Investigations

Topic: Sharks



Spring 2017 edition

**Instructions:** Read through the appropriate Kids' Pages edition and answer the questions below. Once all the questions have been completed, refer to the Answer Key to check your work.

## Multiple Choice (choose one):

- Which of the shark species listed below is NOT commonly found in the Tampa Bay estuary?
  - Bonnethead shark
  - Hammerhead shark
  - Thresher shark
  - Bull shark
- Sharks belong to which class of animals?
  - Chondrichthyes
  - Chelicerata
  - Cephalochordata
  - Urochordata
- What is the fastest recorded speed of the shortfin mako shark?
  - 37 miles per hour
  - 60 miles per hour
  - 50 miles per hour
  - 46 miles per hour
- Blacktip sharks are found off of every continental coast except for which continent?
  - Africa
  - Europe
  - Antarctica
  - Asia
- How many millions of years have sharks been around?
  - 450
  - 600
  - 200
  - 350

## Fill in the Blank:

- Sharks are considered \_\_\_\_\_ (2 words), meaning they are at the top of the food chain.
- Sharks are \_\_\_\_\_ feeders because they feed on the weak and injured animals that are easier to catch.
- Unlike humans, sharks have additional senses that help them sense \_\_\_\_\_ fields and feel \_\_\_\_\_ in the water.
- Using receptors called \_\_\_\_\_ (3 words), sharks can detect the electrical pulses of a heartbeat in the water.

## Short Response:

- Using the information provided in the Conservation Corner section of *Kids' Pages*, define the term "indicator species" using your own words. Discuss the major threats shark populations are facing worldwide, and propose at least three examples not listed in Conservation Corner of ways to protect sharks

# Kids' pages Investigations

Topic: Sharks



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## ANSWER KEY

1. C. Thresher sharks are more commonly found in the pelagic portions of the ocean.
2. A. This class includes all cartilaginous fishes.
3. D. This is the fastest shark species on record.
4. C. Blacktips are also the most abundant shark species in the northern Gulf of Mexico.
5. A. Sharks are older than dinosaurs!
6. Sharks are considered **apex predators** (2 words), meaning they are at the top of the food chain.
7. Sharks are **opportunistic** feeders because they feed on the weak and injured animals that are easier to catch.
8. Unlike humans, sharks have additional senses that help them sense **electrical** fields and feel **vibrations** in the water.
9. Using receptors called **Ampullae of Lorenzini** (3 words), sharks can detect the electrical pulses of a heartbeat in the water
10. Answers will vary. *Example answer: An indicator species is a species within an ecosystem who's presence or absence helps scientists determine the health of that ecosystem. Sharks face many threats such as finning for cultural delicacies, being caught in commercial fishing gear as bycatch, and habitat destruction due to pollution and climate change. As an individual, I can do my part to make smarter choices on where my seafood comes from and buy from local anglers with safe protocols for reducing bycatch. I can also reduce my waste by purchasing products available in recyclable or reusable containers. On a larger scale, amendments can be made to enforce a strictly catch-and-release fishing program.*